California Regional Water Quality Control Board
San Francisco Bay Region

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Arnold Schwarzenegger
Governor

Date AUG 04 2004
File No. 2129.2090(SRL)

Certified Mail No. 70032260000212621925

Mr. Mark Sandon
Kinder Morgan Energy Partners, L. P.
1100 Town and Country Road
Orange, CA 92868

Subject: Transmittal of Cleanup and Abatement Order No. R2-2004-0054 for Kinder Morgan Energy Partners, L.P., Fairfield, Solano County

Dear Mr. Sandon:

Attached is a copy of the Cleanup and Abatement Order No. R2-2004-0054 to govern the cleanup and abatement activities at the Fairfield site, where diesel fuel was released as a result of fuel line rupture on April 27, 2004. The requirements of this Order are effective immediately.

You may contact Mary Rose Cassa at 510-622-2447 or via email at mrc@rb2.swrcb.ca.gov or Shin-Roei Lee at 510-622-2376 or via email at srl@rb2.swrcb.ca.gov, if you have any questions.

Sincerely,

Bruce H. Wolfe
Executive Officer

Attachment: Order No. R2-2004-0054

Cc: with attachment
Steven Osborn
Kinder Morgan Energy Partners, L.P.
P. O. Box 1381
Rocklin, CA 95677

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

CLEANUP AND ABATEMENT ORDER No. R2-2004-0054
KINDER MORGAN ENERGY PARTNERS, L.P.
FAIRFIELD, SOLANO COUNTY, CALIFORNIA

The California Regional Water Quality Control Board, San Francisco Bay Region (the Board) finds that:

1. Kinder Morgan Energy Partners, L.P., hereinafter the Discharger, owns and operates a fuel distribution pipeline, transmitting fuel from the Concord Terminal in Martinez, Contra Costa County, to product terminals in Sacramento.

2. On April 27, 2004, a 14-inch pipeline ruptured, releasing diesel fuel, along a pipeline corridor adjacent to railroad tracks into the Suisun Marsh about five miles south of Fairfield, Solano County. The exact volume of diesel fuel released from the Discharger's pipeline has not been determined, but the Discharger has estimated the volume to be 85,000 gallons. The pipeline corridor is in a wetland slough system within Suisun Marsh, which drains into Suisun Bay.

3. Since the spill occurred, Board staff has coordinated with staff from the California Department of Fish and Game, Office of Spill Prevention and Response (DFG/OSPR) to coordinate oversight of the emergency activities. Within the levees and tide gates in the marsh system, the spill has been contained within 242 acres of area.

4. The site is comprised of the Drake Sprig Duck Club and includes about 242 acres of managed wetlands located adjacent and east of Union Pacific Railroad (UPRR) right-of-way. The general site layout, including the location of the release and Divisions A through D, is shown on Figure 1. The majority of diesel-impacted soil is found in Division A (adjacent to the release location), with more localized areas of impact in Division B. Diesel impacts to soil or surface water have generally not been encountered in Divisions C and D.

5. **Land Use:** Historic site land use included agriculture, and reportedly included cultivation of asparagus. Land use changed from agricultural to recreational, and the site is currently used as a private duck club. Operation of the site to support duck hunting includes seasonal flooding, and mowing and burning of the vegetation to enhance the site productivity as a duck habitat.

6. **Soils:** Soils at the site consist of peat and have been mapped by the National Resource Conservation Service (NRCS) as the "Joice muck" (Ja) series. The Joice series consist of poorly drained organic soil with a high mineral content and are formed from hydrophytic plant remains mixed with fine mineral sediments. A typical profile of these series consists of slightly plastic, strongly acid clayey muck, with 35% to 45% organic matter to a depth of 60

inches. These soils are classified with a permeability rating of 2.0 to 6.3 inches per hour and are characterized as having a high shrink, low swell shrink-swell potential.

7. **Surface Water:** Surface and groundwater drainage at the site is controlled by a system of gates and levees that have modified the site's natural drainage regime. Suisun Slough, a north/south oriented meandering channel is located east of the site and is the dominant regional drainage feature in the site vicinity. The site is connected to Suisun Slough by Roos Cut, located along the southern boundary of Division C. An interconnected system of smaller surface water channels (the largest being Old Roos Cut) connects the interior portions of Division B and Division A to Roos Cut and ultimately to the Suisun Slough. Flooding and drainage of the site is achieved through the operation of gates and levees that control the flow of water into and out of the system of interior channels, Roos Cut and the Suisun Slough. The Suisun Slough is tributary to Suisun Bay.

8. **Groundwater:** Depth to shallow groundwater beneath the site is governed by the season and the operation of the surface water gates and levees. In Division A, shallow groundwater was encountered at approximately one to two feet below the ground surface (bgs) near the time of the discovery of the release. Since that time, depth to water in Division A has remained fairly consistent although some fluctuations related to water inflow and discharge in Division B have been observed. Groundwater in Division B is influenced by surface-water levels and is generally shallowest adjacent to surface water channels. Surface water and shallow groundwater at the site is moderately to very saline. Surface and groundwater monitoring data collected as part of initial response activities at the site (Table 2) indicate that the total dissolved solids (TDS) of surface water in Old Roos Cut is in the range of 5,000 mg/L, and shallow groundwater within Division A is in the range of 10,000 to 40,000 mg/L.

9. **Emergency Response Actions:** The Discharger has taken significant efforts to contain and recover released diesel fuel. They are summarized as follows:

   Pipeline Right-of-Way
   - Replacement of a 50-foot section of the pipeline
   - Excavation and removal of diesel-affected soils

   Division A
   - Recovery of diesel fuel using vacuum trucks, pneumatic pumps, and absorbent boom and pads
   - Excavation of trenches and pits to recover diesel fuel
   - Excavation of diesel-affected soils

   Division B
   - Recovery of diesel fuel using pneumatic pumps and absorbent booms and pads
   - Excavation of limited trenches to recover diesel fuel

   Implementation of these measures has been successful in removing an estimated 56,000 gallons of diesel fuel and 9,000 gallons of oily liquids.

   In addition, the Discharger has conducted preliminary site investigation and characterization including:

- Installation and monitoring of over 80 temporary monitoring points in Division A .
- Collection and analysis of soil samples from the borings for the temporary monitoring points.
- Collection and analysis of groundwater samples from selected monitoring points.
- Collection and analysis of several rounds of surface water samples from sampling locations established in Old Roos Cut and Roos Cut.
- Collection of soil vertical profile samples from Division A. Samples were collected from shallow (less than three foot deep) trenches and submitted for laboratory analysis to obtain vertical extent data in Division A.
- Collection of soil, surface and groundwater samples from Divisions A and B for microbial activity testing and analysis.

10. **Interim Remedial Action Work Plan:** The Discharger has submitted to this Board and DFG a draft Interim Remedial Action Work Plan to Address Diesel-Affected Soils at the KMEP Suisun Slough Release Site dated June 11, 2004 (hereinafter the Plan). This Plan focuses on the implementation of interim remedial actions for portions of Divisions A and B and provides a preliminary summary of results of investigations in those areas that support the selection of interim remedial actions.

11. Based on findings 2, 3, and 4, the Board finds that the Discharger has caused or permitted the discharge of hydrocarbons to waters of the State and created and threatened to continue to create pollution. This Order, therefore, establishes time schedules for implementing the interim remedial actions selected and requires post-emergency investigation and remediation of surface water, sediment, soil, and groundwater, restoration of wildlife habitat, and mitigation.

12. **State Water Board Policies**: State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives. Given the Board's past experience with groundwater pollution cases of this type, it is unlikely that background levels of water quality can be restored. This initial conclusion will be verified when a remedial action plan is prepared. This order and its requirements are consistent with Resolution No. 68-16.

    State Water Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

13. **Preliminary Cleanup Goals**: The Discharger will need to make assumptions about future cleanup standards for soil, sediment, and groundwater, in order to determine the

necessary extent of remedial investigation, interim remedial actions, and the draft remedial action plan. Pending the establishment of site-specific cleanup standards, the following preliminary cleanup goals should be used for these purposes:

a. Groundwater: Applicable water quality objectives (e.g., lower of primary (toxicity) and secondary (taste and odor) maximum contaminant levels (MCLs) or, in the absence of a chemical-specific objective, equivalent drinking water levels based on toxicity and taste and odor concerns. For purposes of this subsection, the Discharger should assume that groundwater is not a potential source of drinking water, based on TDS concentrations detected in excess of 3,000 ppm.

b. Soil/sediment: Applicable screening levels as compiled in the Board's draft Risk Based Screening Levels (RBSLs) document or its equivalent. Soil screening levels are intended to address a full range of exposure pathways, including direct exposure, indoor air impacts, nuisance, runoff to surface water, and leaching to groundwater.

c. Surface water: Applicable water quality objectives (e.g., California Toxics Rule, Basin Plan water quality objectives) based on protection of the most sensitive species or beneficial uses.

14. **Basis for 13304 Order**: California Water Code Section 13304 authorizes the Board to issue orders requiring a discharger to cleanup and abate waste where the discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.

15. **Cost Recovery:** Pursuant to Section 13304 of the Water Code, the Discharger is hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharge of waste and to oversee cleanup of such waste, abatement of the effect thereof, or other remedial action, required by this Order.

16. **CEQA**: This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

IT IS HEREBY ORDERED, pursuant to Section 13304, of Division 7 of the California Water Code, that the Discharger shall cleanup the waste discharged, cease further discharge, and take other remedial actions as follows:

A. Prohibitions

1. The discharge of wastes or hazardous materials in a manner which will degrade water quality, adversely affect beneficial uses of waters of the State, or in a way that is contrary to the specifications of this Order is prohibited.

2. Further migration of pollutants by surface transport to waters of the State is prohibited.

3. Activities associated with subsurface investigation and cleanup, which will cause significant adverse migration of pollutants, are prohibited.

4. Wastes shall not be disposed of, in any way, where they can be carried from the site, or temporary storage site, and discharged into waters of the State.

5. The treatment or storage of waste shall not cause pollution or nuisance as defined in Section 13050 of the California Water Code, and shall not degrade the quality of any water.

B. Provisions

1. **INITIAL EMERGENCY RESPONSE ACTIONS**

The Discharger shall take and continue to take immediate actions to remove all "free phase" diesel fuel from the impacted areas to the maximum extent possible, minimizing further impacts to waters of the State (including wetlands). All cleanup must be proposed in writing and must be acceptable to the DFG, U.S. Coast Guard or U.S. EPA, and the Board's Executive Officer.

a. All waste material excavated as part of the Discharger's initial emergency response actions or generated pursuant to this Order must be appropriately treated and/or disposed of. Such waste material may be stored on site for a time period not to exceed 90 days. If stored on site, the storage method must be approved by the DFG and the Board's Executive Officer. All excavated areas shall be backfilled with clean materials and revegetated, if necessary to conditions acceptable to the DFG and the Board's Executive Officer.

b. A technical report shall be submitted to the Board and DFG within five working days of the completion of emergency response actions, including but not be limited to identifying the areas excavated, the volume of soil/sediment removed, the locations of soil/sediment samples, and the lab analyses of those samples. In addition, the report shall include an accounting of the volume of diesel released versus the volume recovered during the initial emergency response operation.

2. **COMPLETION OF INTERIM REMEDIAL ACTION**

COMPLIANCE DATE: NOVEMBER 30, 2004

Submit a technical report acceptable to the Executive Officer documenting completion of necessary tasks identified in the Interim Remedial Action Plan as described in Finding 10.

3. **WETLAND MITIGATION PLAN**

COMPLIANCE DATE: NOVEMBER 30, 2004

The Discharger shall submit a Wetland Mitigation Plan, acceptable to the Executive Officer and DFG, to ensure that impacted wetlands will be restored to their previous conditions and is acceptable to the landowners. This plan shall propose mitigation for the temporal and any long-term loss of wetland function and value as a result of the fuel release and cleanup. The plan shall include, but not be limited to, a study of vegetation, small mammals, birds, and reptiles and temporal and any long-term damage of aquatic resources. Any study performed under Natural Resources Damage Assessment can be submitted as part of compliance with this provision.

4. **REMEDIAL INVESTIGATION WORKPLAN**

COMPLIANCE DATE: OCTOBER 30, 2004

Submit a workplan acceptable to the Executive Officer to define the vertical and lateral extent of soil, sediment, and groundwater pollution. The workplan shall specify investigation methods and a proposed time schedule. Work may be phased to allow the investigation to proceed efficiently, provided that this does not unreasonably delay final remediation of the site.

5. **FINAL REMEDIAL ACTION PLAN INCLUDING DRAFT CLEANUP STANDARDS**

COMPLIANCE DATE: 90 days after completion of the Remedial Investigation

Submit a technical report acceptable to the Executive Officer containing:

a. Results of the Remedial Investigation
b. Evaluation of the completed interim remedial actions
c. Feasibility study evaluating alternative final remedial actions
d. Risk assessment for current and post-cleanup exposures
e. Recommended final remedial actions and cleanup standards
f. Implementation tasks and time schedule

Item c. should include projections of cost, effectiveness, benefits, and impact on public health, welfare, and the environment of each alternative action.

Items a. through c. should be consistent with the guidance provided by Subpart F of the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), CERCLA guidance documents with respect to remedial investigations and feasibility studies, Health and Safety Code Section 25356.1(c), and State Board Resolution No. 92-49 as amended ("Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304").

Item e. should consider the preliminary cleanup goals for soil and groundwater identified in Finding 13 and should address the attainability of background levels of water quality (see Finding 12).

6. The Discharger shall submit to the Board a **quarterly status report** within **15 days** after the end of the previous quarter, starting October 15, 2004, describing remedial activities performed and documenting monitoring results.

7. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board, using approved U.S. EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control records for Board review.

8. The Discharger shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed to achieve compliance with the requirements of this Order.

9. The Discharger shall permit the Board or its authorized representatives, in accordance with Section 13267(c) of the California Water Code, the following:
   - Entry upon the premises in which any pollution sources exist, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
   - Access to copy any records required to be kept under the terms and conditions of this Order.
   - Inspection of any monitoring equipment or methodology implemented in response to this Order.
   - Sampling of any surface water, groundwater or soil/sediment which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the Discharger.

10. If the Discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Discharger shall promptly notify the Executive Officer in writing and if accepted, the new dates shall be an addendum to this Order.

11. The Discharger shall immediately notify the Board by telephone at (510) 622-2300, whenever an adverse water quality condition occurs because of remedial activities. A written confirmation on the incident shall follow within five working days. The written report shall include but not be limited to the following information:
    - The nature of the waste or pollutant.
    - The quantity involved and the duration of the incident.
    - The cause of the spill.
    - The estimated size of the affected area with a map showing the spill site.
    - The corrective measures that have been taken or planned.

12. As described in Finding 15, upon receipt of a billing statement for costs incurred pursuant to Section 13304 of the Water Code, the Discharger shall reimburse the Board.

13. The Discharger shall provide copies of all correspondence, reports, and documents regarding compliance with this Order to the DFG.

Pursuant to California Water Code sections 13304 and 13350, if the Discharger fails to comply with the provisions of this Order, the Board may schedule a hearing to consider assessing civil monetary penalties and to consider requesting the Attorney General to take appropriate enforcement action against the Discharger, including injunctive and civil monetary remedies.

Bruce H. Wolfe
Executive Officer

August 3, 2004
Date